## ABSTRACT OF THE DISCLOSURE

A method of authenticating a user's data processing terminal for granting the data processing terminal access to selected services provided by a data processing system. The method includes performing a first, SIM-based authentication of the user's data processing terminal at an authentication data processing server in the data processing system, by operatively associating with the user's data processing terminal a first subscriber identity module issued to the data processing terminal user, for example, of a type adopted in mobile communication networks for authenticating mobile communication terminals. The authentication of the user's data processing terminal in the data processing system is conditioned to a second authentication, based on identification information provided to the user at a mobile communication terminal through a mobile communication network to which the mobile communication terminal is connected, e.g. in the form of an SMS message.